



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/730,642	12/08/2003	Darrel J. Van Buer	GP-303047	3016

7590 08/16/2006

KATHRYN A MARRA
General Motors Corporation
Legal Staff, Mail Code 482-C23-B21
P.O. Box 300
Detroit, MI 48265-3000

EXAMINER

NGUYEN, CUONG H

ART UNIT PAPER NUMBER

3661

DATE MAILED: 08/16/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/730,642	VAN BUER ET AL.	
	Examiner	Art Unit	
	CUONG H. NGUYEN	3661	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 15 May 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-23 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-23 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 07 November 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

Art Unit: 3661

Status of the claims

1. This Office Action is the answer to a REMARKS received on 5/15/2006. Claims 1-23 are currently pending.

Drawing

2. This application has been filed with 4 sheets of formal drawings, and they are accepted for examinations.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office Action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. **Claims 1, 7-16, 18-20, and 22-23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Jones (US Pat. 6,748,318), in view of Bullock et al. (US Pat. 6,526,349).**

A. As to independent claim 1: Jones teaches a method for predicting vehicle operator destinations, comprising steps of:

- receiving data (i.e., vehicle position data - see Jones, Fig.2, ref.25);
- comparing said data – please note that a “pattern recognition” of data in a database is used to compare (e.g., comparing to vehicle position data for a previous trip - see Jones, col.19 line 64 to col.20 line 10);and
- mapping a path to a destination (see Jones, 19:58 to 20:10).

Jones does not expressly disclose of using pattern recognition to compare position data.

However, Bullock et al. teach that idea – i.e., recognizing normal traffic patterns, or automatically monitoring a driving pattern of a user, or comparing destination/location data (e.g., see Bullock et al., claim 2 – please also note that a technique of “pattern recognition” especially by comparing to previous stored data to recognize a close similarity has been widely used in many fields).

It would have been obvious to one of ordinary skill in the art at the time of invention to combine Jones and Bullock et al. in recognizing driving patterns to disclose of using pattern recognition to compare position data for a clear advantage of quickly perform an automatically search from stored previous actions to obtain/retrieve a close resemblance of “preference” by simply perform a well-known data comparison, and eliminating unnecessary data.

B. As to dependent claim 7: Jones also shows that position data includes navigation coordinates (see Jones, Fig.14 ref. 604).

C. As to independent claim 8: Jones also shows said navigation coordinates are GPS coordinates (see Jones, Fig.14 ref. 604).

D. As to claim 9: Jones also teaches that vehicle position data includes a time stamp, a date stamp and navigation coordinates (see Jones, Fig.14 ref. 601, and col.18 lines 30-31).

E. As to claim 10: Jones also teaches that vehicle position data include a vehicle heading/direction, and a vehicle speed (please note that a vehicle’s speed is derived knowing distance & time traveled - see Jones, col.22 lines 35-43, col.32 lines 13-22, and col.34 lines 38-52).

Art Unit: 3661

F. As to claim 11: Jones also shows that communicating to an operator of said vehicle responsive to said suggesting/route planning (inherently in Jones, Fig.3 ref.75).

G. As to claim 12: Jones also shows that communicating is responsive to vehicle data (see Jones, Fig.2 ref. 12).

H. As to claim 13: Jones also teaches that communicating is further responsive to environment data (i.e., traffic jam/adverse weather problems, see Jones, col.2 lines 9-22).

I. As to claim 14: Jones also shows that communicating to a telematic service (see Jones, Fig.2 ref. 25).

J. As to claim 15: Jones also shows that a telematic service is one or more of navigation, traffic, and weather .et. (see Jones, Fig.2 ref. 25).

K. As to claim 16: Jones also shows that receiving occurs a time interval (see Jones, Fig.14 ref. 605).

L. As to claim 18: Jones also shows that a vehicle is an automobile (see Jones, Fig.1 ref. 19).

M. As to independent claims 19, and 22: Jones also teaches a system for predicting vehicle operator destinations, comprising:

- a navigation device (see Jones, Fig.1 ref. 25);
- a storage device (see Jones, Fig.1 ref. 14 "BASE STATION CONTROL UNIT");
- a microprocessor in communication with said navigation device and said storage device (see Jones, Fig.1 ref. 10), said microprocessor including instructions to implement the method comprising:

- receiving vehicle position data for a vehicle via said navigation device (see Jones, Fig.3 ref. 70);

Art Unit: 3661

- comparing said vehicle position data for a current trip to vehicle position data for a previous trip to predict a destination for said vehicle (this portion is similar AS pending CLAIM 1(b)'S LIMITATION wherein Bullock et al. suggest about pattern recognition - see Bullock et al., claim 2); therefore, similar rationales and reference set forth are applied), said vehicle position data for a previous trip stored in said storage device (see Jones, Fig.1 ref. 14 "BASE STATION CONTROL UNIT"); and
- suggesting a path to said destination (this limitation is similar as a limitation of claim 1c).

Please note that applicants use the term "from one or more external sources" in new claim 23; the examiner picks "from one external source" such as receiving data from a single stored database – this is already suggested by cited art.

N. As to claim 20: Jones also shows a navigation device is a GPS receiver (see Jones, Fig.14 ref. 604).

O. As to claim 23: The examiner submits that Bullock et al. also show that a prediction is based on the information from a source and the results of the comparing (see Bullock et al., Fig.1 refs. 120, 102, 112,164, 160, 137, 104, 124 – these refs. show a computer "linkage" between components to get data from external sources.

4. Claims 2-6, 17, and 21 are rejected under 35 U.S.C. § 103 as being unpatentable over Jones (US Pat. 6,748,318), in view of Bullock et al. (US Pat. 6,526,349), further in view of Fuchs et al. (US Pat. 6,567,745).

The rationales and reference for rejection of claim 1 are incorporated.

Art Unit: 3661

A. As to claims 2, and 5: At first, please note that “comparing” is merely an action to obtain a result before a predicting step; therefore, claiming “predicting” is including a step of “comparing”.

Jones does not disclose that pattern recognition technology is used for predicting a vehicle destination/driver’s behavior.

However, it is obvious that a comparison includes performing event categorization and pattern recognition (i.e., a weekday trip vs. a weekend trip; a routine stopping at a familiar 7-11 store for a cup of coffee in weekday vs. a stopping at a local church for masses in week-end.etc.).

Jones does not disclose that pattern-recognition technology is used for predicting a vehicle destination.

However, Fuchs et al. apply that technology in a global positioning environment including getting vehicle position data (see Fuchs et al., 3:5-12).

It would have been obvious to one of ordinary skill in the art at the time of invention to combine Jones, Fuchs et al., and Bullock et al. to disclose of using a well-known technique of pattern recognition to compare position data for the advantage of quickly perform a search from stored previous data/actions to retrieve a close resemblance by simply perform a data comparison.

B. As to claim 3: Jones does not expressly identifying transitions between a being stop and being running condition of a vehicle.

However, it is old and well-known to detect a vehicle condition with the GPS by duration it stops/”NOT MOVING” and being underway/”BEING RUNNING”; therefore,

one can know this “MOVING/STOPPING” condition by seeing if vehicle coordinates change in a predetermined time (e.g., it is reasonable to determine “MOVING/STOPPING” conditions with database tables of Jones’ Fig.14 – it is obvious to use this database for knowing if a vehicle is “MOVING/STOPPING”).

C. As to claim 4: Jones does not expressly disclose a pattern recognition technique by combining data of a current trip and a previous trip.

However, it is reasonable to recognize those information from Jones’ Fig.14 for comparison since Jones uses this database as working records.

D. As to claim 6: The rationales and reference for an obviousness rejection of claims 3-4 are incorporated herein because claim 6 contains similar limitations of claims 3 & 4 (i.e., a previous trip includes a starting time and location, an ending time and location, and route data including previous position data - see Jones, Fig.14).

E. As to claim 17: The examiner submits that it is well known to receiving data in response to an input about a distance (in this case, it is a traveling distance for comparing with stored distances; a pattern recognition application of Bullock et al.) – this claimed language is merely an interactive communication (e.g., see Jones, Fig.16).

F. As to claim 21: The examiner submits that it is old to build a storage device located within a microprocessor (e.g., a microprocessor can has its own built-in memory – by integration of available electronic devices depending on a choice of manufacturing technologies).

Response

5. The Remarks filed on 5/15/2006 is unpersuasive; to answer for the argument of “the Examiner has not shown how Jones in view of Bullock teaches or suggests “predicting a

Art Unit: 3661

destination for said vehicle based on the results of the comparing”, this “predicting” action is clearly resulted from “comparing” actions that was taught by cited prior art (there is no logic to do “comparing” action for nothing after that; that action MUST lead/result to something in a process – there is unnecessary to expressly spell-out “a prediction action” because that act of comparing would teach about results/a prediction).

Conclusion

6. Claims 1-23 are still not patentable; accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicants are reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

7. Related prior art:

- O’Neal, (US Pat. 4,359,733) teaches about comparing position data of a vehicle, where the position data just calculated is compared with position data that was previously calculated for the same aircraft and stored at a number of reserved locations in the identified memory data block;

Art Unit: 3661

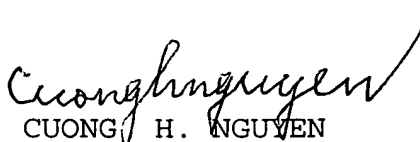
the results of this comparison are used to obtain the speed, and true course of the vehicle based on the time elapsed between successive position calculations.

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to CUONG H. NGUYEN whose telephone number is 571-272-6759. The examiner can normally be reached on 9:30 am - 5:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, THOMAS G. BLACK can be reached on 571-272-6956. The Rightfax number for the organization where this application is assigned is 571-273-6759.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Please provide support, with page and line numbers, for any amended or new claim in an effort to help advance prosecution; otherwise any new claim language that is introduced in an amended or new claim may be considered as new matter, especially if the Application is a Jumbo Application.


CUONG H. NGUYEN
Primary Examiner
Art Unit 3661